DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-004218
Date Inspected: 15-Sep-2008

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 630
OSM Departure Time: 1530
Location: Shanghai, China

CWI Name: Zhang Bao

Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☐ Yes	☐ No	☑ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No	☐ N/A
				Approved WPS:	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: OBG Assembly

Summary of Items Observed:

This report serves to document the events occurring on this date at the following location. Caltrans Quality Assurance (QA) Inspector Robert Vatcher arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. The QA Inspector observed the following: The weather today is 31C, clear with winds at 2-3 kph.

Orthotropic Box Girder (OBG) Fabrication

QA observed that Diaphragm Plate installation and intermediate work continues on Deck Panels DP049-001, DP050-001, DP051-001, DP073-001, DP074-001 & DP075-001 which were previously detailed in an Incident Report generated on 09/01/2008 by this QA Inspector.

3AW

QA observed at segment 3AW that welding was being performed on LD019-002-003 to SSD10A panel point 020 in the 1G position. QA queried AB/F QC representative Li Hao about this condition and he replied “It is a mistake, all other in the overhead position but this one made in the flat position.” QA approached the opposite Longitudinal Diaphragm at location LD020-002-006 and observed that this particular joint was currently available for joining in the 4G overhead position as required and stated on the shop drawings. QA will bring this situation to the attention of SMR Ady Velasco.

QA was informed to come back to the LD019-002-003 to SSD10A panel point 020 joint because Mr. Zhang Bao wanted to notify QA that there were cracks visually observed in the tack weld locations prior to depositing further weld metal. QA mentioned that AB/F QC representative Art Peterson should be notified of this incident. Mr. Peterson, within the approximate vicinity, arrived and was apprised of the crack situation. Mr. Peterson mentioned that the crack will be removed by grinding and as long as the crack in the tack weld does not get removed below 3 mm then there will be no requirement for a Critical Weld Repair (CWR). QA explained to Mr. Peterson that there was also the issue of the crack found visually in the base material adjacent to the cracked tack weldment. Mr. Peterson mentioned the same as before exclaiming that if it didn't go below 3 mm that a CWR would not be required.

4AW

QA observed that installed Super Deck Panels were previously joined. QA spoke with AB/F QC Zhang Bao who mentioned that they were joined on Saturday September 13th. QA took photographs of these two joints as well and will be on file for future reference if required. QA asked Zhang Bao if the joints had, for the Super Panels because of the extended out of tolerance root openings, were applied with surface weld metal to decrease the amount of root opening. Mr. Zhang could not answer QA's query.

Mid Bay

QA observed the following Deck Panels having Diaphragm Plates previously installed or currently having installed over U-Rib plates. An incident report will be generated for the following deck panels due to ZPMC continuously installing said diaphragm plates over U-rib deck panel partial joint penetration welds.

DP040-001, DP038-002, DP052-001, DP002-002, DP004-001, DP037-001, DP038-001, DP039-001, DP076-001, DP003-001, DP002-001, DP001-001, DP077-001, DP078-001, DP079-001, DP007-001 (previously documented in Incident Report by QA representative Paul Dawson), DP006-001, DP005-001, DP055-001, DP054-001, DP053-001, DP044-001, DP042-001, DP080-001.

4BE

SMAW operation in the 4G position at SP44A to SSD020A welder ID Ren Jinzu (qualified for 4G and 1G only). QA observed the angle of welding at this location and queried AB/F QC representative Wang Heng if he was certain this was the 4G position due to the steep vertical angle appearing to be the vertical or 3G position. Mr. Heng mentioned that the exact angle of the joint being welded was 23 from vertical 0. QA asked how Mr. Heng knew this for certain in which he replied "It is stated on the drawings." QA stated that he would research the code for further review of this potential issue. Mr. Heng then left and returned after retrieving a copy of AWS D1.5 2002) and allowed QA to review the appropriated section in the code. QA observed that the threshold between the 3G and 4G position was 20 from 0 or 280 and 320 respectively. Beyond 20 would require qualification in the 4G position which the welder was. QA mentioned to Mr. Heng "Xie Xie" (thank you) and exited the location.

The above mentioned items, except where indicated, appear to be in compliance with the contract documents.

WELDING INSPECTION REPORT

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Summary of Conversations:

No relevant conversations this date.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Ady Velasco 138-1694-2685, who represents the Office of Structural Materials for your project.

Inspected By:	Vatcher,Robert	Quality Assurance Inspector
Reviewed By:	Cuellar,Robert	QA Reviewer